Metabolically inert perfluorinated fatty acids directly activate uncoupling protein 1 in brown-fat mitochondria

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Online Resource 3

Parameters of Michaelis-Menten kinetics fitting of concentration-response curves of PFOA, PFOS and octanoic acid in brown-fat mitochondria

Parameters	UCP1-dependence	PFOA	PFOS	Octanoic acid
K_m μM	UCP1-dependent (WT – UCP1 KO)	162	N/C	399
	UCP1-independent (UCP1 KO)	676 ± 110	243 ± 162	2503 ± 12#
V_{max} $\frac{\text{nmol } O_2}{\text{min} \bullet \text{mg}}$	UCP1-dependent (WT – UCP1 KO)	51	N/C	32
	UCP1-independent (UCP1 KO)	49 ± 10	24 ± 6	92 ± 7#

UCP1-independent K_m and V_{max} are mean ± S.E. obtained from analysis of each individual concentration-response curve for PFOA, PFOS, and octanoic acid for the best fit option of the GraphPad Prism application for adherence to simple Michaelis-Menten kinetics; n = 2-3.

UCP1-dependent K_m and V_{max} are necessarily based on the subtracted mean values only but are thus indirectly based on 5-6 independent preparations.

N/C: not calculable (concentration-response curve for PFOS does not fit to simple Michaelis-Menten kinetics)

# indicates statistically significant difference between octanoic acid and PFOA ($P < 0.05$)